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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
08/209,869	03/21/94	YAEGI	H 29

EXAMINER
SHERRER, C

ART UNIT	PAPER NUMBER
1302	9

1301/0331

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DATE MAILED: 03/31/97

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 12/27/97

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 2-5 and 11-12 is/are pending in the application.
Of the above, claim(s) _____ is/are withdrawn from consideration.
☐ Claim(s) _____ is/are allowed.
☒ Claim(s) 2 to 5, 11 and 12 is/are rejected.
☐ Claim(s) _____ is/are objected to.
☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
☐ The specification is objected to by the Examiner.
☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.
☐ received in Application No. (Series Code/Serial Number) _____.
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of Reference Cited, PTO-892
☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
☐ Interview Summary, PTO-413
☐ Notice of Draftperson's Patent Drawing Review, PTO-948
☐ Notice of Informal Patent Application, PTO-152

–SEE OFFICE ACTION ON THE FOLLOWING PAGES–

★ U.S. GPO: 1996-404-496/40517

Part III DETAILED ACTION

Election/Restriction

1. This application contains claims 7 to 10 drawn to an invention non-elected with traverse in Paper No. 5. A complete response to the final rejection must include cancellation of non-elected claims or other appropriate action (37 C.F.R. § 1.144) M.P.E.P. § 821.01.

Specification

2. A substitute specification is required because the number of amendments places an undue burden upon the Office. The substitute specification filed must be accompanied by a statement that it contains no new matter. Such statement must be a verified statement if made by a person not registered to practice before the Office.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the

invention was made, owned by the same person or subject to an obligation of assignment to the same person.

4. Claims 2, 5, 11 and 12 are rejected under 35 U.S.C. § 103 as being unpatentable over Dorau et al. (U.S. Pat. No. 5,362,395) in view of Hei et al. (U.S. Pat. No. 5,484,549) or Berndt (U.S. Pat. No. 5,520,888) or Kramer et al. (U.S. Pat. No. 5,215,554) for the reasons set forth in the last Office Action.

5. Claim 3 is rejected under 35 U.S.C. § 103 as being unpatentable over Dorau et al. (U.S. Pat. No. 5,362,395) in view of Hei et al. (U.S. Pat. No. 5,484,549) or Berndt (U.S. Pat. No. 5,520,888) or Kramer et al. (U.S. Pat. No. 5,215,554) and in further view of Brock (Biology of Microorganisms pp. 214 and 215) for the reasons set forth in the last Office Action.

6. Claim 4 is rejected under 35 U.S.C. § 103 as being unpatentable over Dorau et al. (U.S. Pat. No. 5,362,395) in view of Hei et al. (U.S. Pat. No. 5,484,549) or Berndt (U.S. Pat. No. 5,520,888) or Kramer et al. (U.S. Pat. No. 5,215,554) and in further view of Brock (Biology of Microorganisms pp. 202 to 204) for the reasons set forth in the last Office Action.

Response to Arguments

7. Applicant's arguments filed 12/27/96 have been fully considered but they are not persuasive.

8. Applicants base their argument on the assertion that "the presently claimed invention utilizes ozone-treatment of biosludge, including the excess sludge . . . ." While this is true, this claim limitation is merely an alternative to the treatment of the aerated aqueous suspension. Specifically, independent Claim 6 states "ozonizating either aerated aqueous suspension withdrawn for the aeration tank or a part of the separated sludge . . ., recycling either the ozonized aerated aqueous suspension or the ozonized part of the separated sludge back to the aeration tank for aerobic biological treatment."

9. Applicants continue by stating that "[t]he complete elimination of excess sludge can only be realized by the ozone treating of part of the biosludge returned." This is not understood because one cannot completely eliminate the excess sludge if one only treats part of the sludge. Further, and more importantly, the claims are not limited to th The difference between the primary reference and the claimed invention is that the ozonization of the waste stream occurs at a pH of 5 or lower. The primary reference is silent as to this limitation. The secondary references are relied on to teach what is well known in the art about using lower pH's with respect to ozonization.

10. Applicants contend that the secondary Hei reference is distinguishable because "the fact that ozone may become more unstable at higher pH's has no correlation between at with

respect to the reaction efficiency of ozone at the presently claimed pH range." It is considered that this teaching, and those of the other cited references, are highly relevant to those in the art, whereby if one wants an efficient ozonization step, then the pH must be kept low. While the art does not state that the pH must be 5 or lower, it is considered that this merely involves optimization. See In re Boesch, 205 U.S.P.Q. 215 (1980). Those in the biochemical fermentation art are well versed in the relationship of pH to the dissociation of chemical compounds.

11. Applicants discuss the results of their Example 2, from page 55 and 56, using a pH of 7 during the ozonization whereby "the rate of formation of the excess sludge was the same as if the ozone treatment had been omitted." This is not unexpected as the prior art teaches that it should be kept lower than a pH of 6.

12.

Conclusion

13. No claim is allowed.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory

period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis Sherrer whose telephone number is (703) 308-3847. The examiner can normally be reached on Monday through Friday from 6:00 to 2:30.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Esther Kepplinger, can be reached on (703)-308-2339. The fax phone number for this Group is (703)-305-3602.

17. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.

Curtis E. Sherrer

March 28, 1997

Esther Kepplinger

ESTHER KEPPLINGER
SUPERVISORY PATENT EXAMINER
GROUP 1300